

AMENDMENTS TO THE CLAIMS

1. (currently amended) A seal cartridge for an industrial damper having a damper blade movable between open and closed positions, the seal cartridge comprising: a flange having a U-shaped cross-section, said U-shaped flange having an inner leg and an outer leg, said U-shaped flange forming extending completely around an opening of the industrial damper so as to form a closed loop; and a flexible seal membrane attached to said inner and outer legs of said U-shaped flange to form an air chamber, the flexible membrane being operably configured to be collapsible upon imposition of a negative pressure within the air chamber, the flexible membrane alternatively adopting, in the absence of said negative pressure, an extended, non-collapsed position, to, in turn, bear against the damper blade in a sealing position, when the damper blade is in its closed position.
2. (original) The seal cartridge of claim 1 further comprising: an inner seal membrane guide disposed adjacent said inner leg on the inside of said air chamber; and an outer seal membrane guide disposed adjacent said outer leg on the inside of said air chamber.
3. (original) The seal cartridge of claim 1 further comprising: a blade guide located at the open end of said U-shaped flange adjacent said inner leg and outside of said air chamber; wherein said inner leg is longer than said outer leg.
4. (currently amended) In a damper for a duct having a frame mounted cross-sectionally in said duct, a blade plate that translates into and out of said duct to close and open said damper, and a seal cartridge having an air chamber for inflating and deflating a seal membrane, said seal cartridge being mounted in said frame, said seal membrane engaging with said plate when in the closed position to seal said duct, an improvement comprising: one or more attachment members, for removably securing said seal cartridge to said frame, the flexible membrane being operably configured to be collapsible upon imposition of a negative pressure within the air chamber, the flexible membrane alternatively adopting, in the absence of said negative pressure, an extended, non-collapsed position, to, in turn, bear against the damper blade in a sealing position, when the damper blade is in its closed position.

5. (original) The improvement of claim 4 further comprising: a blade guide attached to said seal cartridge such that no portion of said seal cartridge extends past said blade guide toward said blade plate when said air chamber is evacuated and said seal membrane is deflated.
6. (currently amended) The improvement of claim 4 further comprising: a plurality of seal membrane guides located inside said air chamber such that portions of said seal membrane assume a minimum radius when said air chamber is evacuated and said seal membrane is deflated.
7. (original) The improvement of claim 4 wherein said seal membrane is attached to said U-shaped flange via a plurality of attachment members for attaching said seal membrane to said inner leg and a plurality of attachment members for attaching said seal membrane to said outer leg.
8. (original) The improvement of claim 7 wherein said attachments members for attaching said seal membrane to said inner and said outer leg are selected from a group composed of bolts, disposed through holes defined in said U-shaped flange and studs, welded to said U-shaped flange.
9. (cancelled).
10. (original) The improvement of claim 4 wherein said seal membrane is composed of a fluoroelastic material.
11. (original) The improvement of claim 10 wherein said fluoroelastic material is reinforced.
12. (original) The improvement of claim 11 wherein said fluoroelastic material is reinforced with a corrosion resistant material.
13. (currently amended) The improvement of claim 11 wherein said fluoroelastic material is reinforced with a material selected from a group comprising stainless steel, nickel alloy, fiberglass, polyester and Kevlar®.
14. (original) The improvement of claim 7 wherein said inner and outer seal membrane guides are located nearer the open end of said U-shaped flange than said plurality of attachment members attaching said seal membrane to said flange.

15. (original) The improvement of claim 6 wherein said inner and outer seal membrane guides have circular cross sections.
16. (original) The improvement of claim 5 wherein said blade guide is located at the open end of said U-shaped flange adjacent said inner leg and outside of said air chamber.
17. (original) The improvement of claim 16 wherein said blade guide has a circular cross section and further wherein the outer circumference of said blade guide extends past the top of said inner leg.
18. (original) The improvement of claim 5 wherein said blade guide is composed of a hardened metal or a softer metal having a hardened metal coating.
19. (Cancelled)
20. (original) The improvement of claim 4 further comprising a hook attached between said blade plate and said seal cartridge, for lifting said seal cartridge out of said frame.
21. (original) The improvement of claim 4 wherein said one or more attachment members for removably securing said seal cartridge to said frame comprises a plurality of holes defined in said U-shaped flange corresponding to a plurality of holed defined in said frame, further comprising a plurality of nuts welded to said U-shaped flange at each of said defined holes and a plurality of bolts extending through said holes defined in said frame and said U-shaped flange and engaging said nuts.
22. (Cancelled)